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## Food habits of the nymphs of mayfly species (Order Ephemeroptera, family: Baetidae) collected from several streams in Sri Lanka

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The nymphs of Ephemeroptera are an important component of aquatic macroinvertebrate assemblages in streams of Sri Lanka. An extensive investigation on the food habits of mayfly nymphs (family: Baetidae) was conducted from January 1997 to December 1999 and nymphs were collected from Ramboda Dola, Hakgala Dola, a tributary running through Somerset estate, a tributary of Kelani ganga in Ruwanwella and Aswathu Oya in Puwakpitiya. The nymphs were killed and preserved immediately in 50% formaldehyde at the study sites.

Nymphs of *Indobaetis costai* Muller-Liebenau (Ramboda and Hakgala Dola) *Baetis collinus* M (Somerset Estate tributary), *B. frequentus* M (Ruwanwella and Puwakpitiya) and *Centroptella ceylonensis* M (Aswathu Oya) were present in the samples. The gut contents of the nymphs included particles of detritus, diatoms, minerals and black organic particles. Unidentifiable filamentous and greenish particles were also observed in some nymphs.

All size-classes of *I. Costai* M nymphs had only detritus in their guts. The gut contents of larger *B. Collinus* (3.0-5.0 mm ) included higher proportion of detritus ( $p < 0.05$ ) than that of black organic particles. The smaller *B. Collinus* (<3.0 mm) had only detritus in their guts. The nymphs of *B. frequentus* collected from Ruwanwella had significantly higher ( $p < 0.01$ ) proportion of detritus than those of mineral particles (6.9%), *Navicula* sp. (2.4%) and unidentifiable particles (5.4%). *Baetis frequentus* nymphs collected from Puwakpitiya also had more detritus (51.2%,  $p < 0.05$ ) than both mineral (33.1%) and unidentifiable particles (15.7%) in their guts. The gut contents of *C. ceylonensis* nymphs consisted of a higher proportion of detritus (63.2%,  $p < 0.05$ ) than those of mineral particles (20.2%) and unidentifiable particles (16.6%). The morphological characters which can be used in the identification of different sized nymphs of each species and significance of food habits of the nymphs are discussed.

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